Saskatchewan
Agriculture
and Food

Farm & Food Report

Communications Branch, Walter Scott Building
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Saskatchewan

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Log Number: 07-18-80
Week of April 30, 2007

NEW HERD TO ADVANCE RESEARCH IN BEEF INDUSTRY

The federal and Saskatchewan governments are providing $1.1 million to replace the research herd and upgrade research equipment at the Western Beef Development Centre (WBDC) near Lanigan.

WBDC Vice President of Operations Paul Jefferson says the current herd being used for cow-calf research is a commercial, mixed breed herd with a varied background. This can sometimes diminish the certainty of the results drawn from studies done on the cattle, particularly in some of the newer research fields that are becoming increasingly popular with scientific and technological advances.

"As we've been discussing more collaborative efforts with producers and our colleagues in the research community, it was identified that a herd with known genetic background would be useful for the type of work that's going forward into the future, where molecular genetics would be applied to understanding the genotypes of the animals and how this affects their performance and other aspects of beef production," Jefferson said.

As a result, a funding proposal was submitted to purchase a new purebred herd to be housed at the WBDC. The majority of the $1.1 million will be used to obtain approximately 300 new cows.

"These will be two- and three-year-old cows of known genetic background from a purebred source," explained Jefferson. "Our intent is to buy 100 cows per year over a three-year period."

He says this approach will enable the WBDC to wind up its existing research studies already underway using the current herd before they are phased out and replaced with the new animals.

The balance of the funding will go towards facility and equipment improvements necessary to conduct beef research.

Having a herd with a known background and known genetics is a terrific boost to the WBDC's efforts, Jefferson noted. It will enable researchers to study the effects of various treatments on cattle, and determine with greater certainty that their observations are a result of the treatment rather than some factor in the animal's genetic history of which they were not aware.

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"While it's difficult to ever draw an absolute, 100-per-cent conclusion, we will be able to pinpoint with greater accuracy what's causing the difference in the reaction of an animal to the treatment, and make our statements accordingly," he stated.

With 21,000 producers in the province's cow-calf industry, Jefferson says the funding is not only good news for cattle research in Saskatchewan, but also for individual farmers.

"So, much of the work we do has a direct, practical application on the farm or ranch. One of the projects we've been undertaking looks at low-cost winter feeding. We've been able to show that you can reduce the cost of over-wintering a beef cow herd by up to 45 per cent. That's a significant cost reduction to the commercial cow-calf producer," he noted.

"So I think the information that will come from this research will continue to have that kind of impact – reducing production and operating costs to the average producer, and improving competitiveness."

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TIMING IS IMPORTANT IN VACCINATING AGAINST B.V.D.

With over 1.3 million calves born in Saskatchewan each year, producers need to be conscious of vaccinating their herds against bovine viral diarrhoea, or BVD.

The virus, which can manifest in various clinical syndromes, can result in serious losses to producers with infected herds.

"It can cause some major problems: either abortions or calf mortality or infertility," said Dr. John Campbell, a professor at the Western College of Veterinary Medicine. "A number of different scenarios can happen from it, so it's not something you want to get in your herd."

With calving season nearly complete, Dr. Campbell advises that now is the time to plan for BVD vaccination.

"We need to protect the cow for next year's pregnancy in order to protect the foetus she'll be carrying. So, we vaccinate the cow to ensure she's safeguarded, and at the same time we protect the foetus that she has next year," he said.

Dr. Campbell says that the prime time for vaccination is three to four weeks prior to breeding, before cows go to pasture, unless the producer is calving on pasture, in which case the timing is a bit later.

"The first choice you have to make is between a killed or modified-live vaccine," he stated. "In most cases, the modified-live vaccine provides much better protection, and usually has label claims for protecting the foetus. We would recommend the modified-live vaccine in just about every situation. There are a variety of companies that all make very good vaccines."

Dr. Campbell says he is aware that some producers have difficulty getting vaccinations done when calves are young and cows must be separated from them.

"Some will say I'll just give them a killed vaccine in the fall, because I'm handling the cows then and that's pregnancy-checking time," he noted. "The trouble with that approach is the killed vaccine is being relied on to maintain its effect from fall until the next breeding season, and it is not nearly as effective as a live vaccine."

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Dr. Campbell notes that there are now some vaccine companies with label claims that suggest a live vaccine can be used on pregnant cows very late in gestation. He warns that this approach is only effective if the cow has been previously vaccinated with the same vaccine. If not, she may abort.

When considering different approaches to vaccination for BVD, Dr. Campbell advises producers to consult with their local veterinarians to discuss their specific herd management practices and to ensure the most effective method is used.

He also stresses that vaccination is important, even if a herd is already infected with BVD.

"If there's a cow walking around unvaccinated in the pasture in early pregnancy and she gets infected, she may not get very sick, but the virus infects her foetus," Dr. Campbell said. "If that happens at a certain time of gestation, it can cause abortions or congenital abnormalities, or can cause the new calf to become persistently infected. Those calves are often the source of a BVD outbreak."

Dr. Campbell advises that if you have BVD in your herd, you must vaccinate to make sure you don't get a broader outbreak the following year. He says the producer must try to find the persistently infected calves and get them out of the herd. Veterinarians have a relatively simple test to identify the BVD carriers.

Additional information on BVD is available on the Saskatchewan Agriculture and Food website at www.agr.gov.sk.ca.

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FCC AGRISPIRIT FUND ACCEPTING APPLICATIONS

Farm Credit Canada (FCC) is once again providing $500,000 through its AgriSpirit Fund to support capital projects in rural communities across the country.

The fund will be accepting applications for 2007 between May 1 and June 15. To be eligible, an organization must be set up for charitable purposes, be an agricultural society or be partnered with a municipal government that agrees to handle the financial management of the project.

The AgriSpirit initiative is one of the ways FCC works to enhance rural Canada and make life better for people in rural communities.

Grants of between $5,000 and $25,000 are available for community improvement projects involving construction, renovation and/or the purchase of necessary equipment. Examples include community centres, recreation centres, sports facilities, playgrounds, care homes, food banks and emergency service units.

To ensure it maintains its rural focus, FCC stipulates that the fund is only available to communities under 100,000 in population.

Clem Samson, the corporation's Vice-President of Prairie Operations, said, "The commitment rural Canadian residents demonstrate to building their own communities is overwhelming. We received hundreds of applications this year requesting support for a wide range of projects. FCC is proud to help enhance rural Canada."

Out of 719 applications received during FCC's last call for applications, 52 projects from across Canada received funding. Twelve of the successful applicants are from right here in Saskatchewan, assisting all manner of community initiatives from fire departments to health centres to pools and rinks.

There is really no community too small to receive support. Saskatchewan communities that got help in the most recent round of funding are Hazlet, Eastend, Swift Current, Paradise Hill, Birch Hills, Osler, Estevan, Radville, Wood Mountain, Rouleau, Stockholm and St. Brieux.

(more)

"Since launching AgriSpirit in 2004, FCC has supported 130 projects with $1.3 million in funding," said the corporation's Senior Vice-President Kellie Garrett.

All applications are to be submitted online through the program's website, www.agrispirit.ca, which also includes details about the fund's eligibility criteria, application process, success stories and answers to some of the more common questions.

Headquartered in Regina, FCC is Canada's largest provider of business and financial services to farms and agri-businesses.

For more information on the corporation and its operations, visit www.fcc-fac.ca.

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AGRICULTURE PROJECTS DOMINATE INNOVATION AWARD NOMINEES

Three agriculture-based research projects are among the four finalists for the annual Award of Innovation sponsored by Innovation Place and the Industry Liaison Office of the University of Saskatchewan.

The winning project receives a $5,000 cash prize and recognition at both Innovation Place and a gala dinner called "Celebrate Success," put on by the Saskatoon and District Chamber of Commerce and the Women Entrepreneurs of Saskatchewan.

"The technology developed by this year's nominees has great potential to improve our lives through improvements in human health, food production and environmentally friendly energy," said Doug Gill, Managing Director of the Industry Liaison Office. "We will also benefit from the promise of increased investment and more high-quality jobs in our province."

The Award of Innovation is intended to honour U of S researchers who have brought new and commercially viable technology to the Industry Liaison Office for development into marketable products.

This year's finalists offer an impressive mix.

Plant sciences professor Lawrence Gusta, along with his colleagues Albert Robertson and Guohai Wu, has discovered the Rob-5 gene in plants. This gene improves environmental stress tolerance, increases plant vigour and seed yield, and shortens the time required for plants to mature. It has particular value in regions with a shorter growing season, like Saskatchewan.

The U of S has filed an international patent application for the Rob-5 gene and signed an exclusive agreement to license BASF to commercialize it.

In the Department of Applied Microbiology and Food Science, researchers Martin Reaney, SAF Chair in Microbiology and Food Science, and Dushmmanthi Jayasinghe developed a chemical process that has the potential to improve profitability in biofuel generation. The process allows for the production of biodiesel, de-salted glycerol and lithium grease from oilseeds that are not suitable for edible oil products, such as frost-damaged canola.

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This innovation would enable producers to make biodiesel and two other high-value products from the same feedstock. The patent on the process is pending.

Biology professor Vipen Sawhney is nominated for his work on a line of tomatoes that are particularly suited to hybrid seed production. The so-called "photoperiod-sensitive-male-sterile tomatoes" reduce the cost of hybrid seed production by eliminating the necessity for hand removal of the male part of tomato flowers, which is highly labour intensive.

The tomato line has already been licensed to a commercial seed producer in Italy.

The fourth nominee comes from the Western College of Veterinary Medicine. Immunologists John Gordon and Fang Li have developed a human anti-inflammatory treatment that uses the protein G31P to target inflammation associated with neutrophils, a type of white blood cell.

Innovation Place Director of Marketing Jackie Presnell said in a news release, "Many of the enterprises at Innovation Place are built on ideas that began at the university, and many of the highly qualified people that work here are U of S grads."

The winner of the Innovation Award will be announced at the "Celebrate Success" dinner on May 15 in Saskatoon.

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WINNING WITH NITROGEN FERTILIZER

Many factors can affect the profitability of your crop – including fertilizer prices. The question each year is: will the money you spend on fertilizer pay off in the bin?

The Canola Council of Canada is weighing in on the issue with some advice about nitrogen rates.

With the cost of urea fertilizer rising – including some recent price reports of over $600 per tonne – canola growers who didn't purchase fertilizer in the fall or winter when prices were lower, might be tempted to cut back on nitrogen this season. But John Mayko, the council's senior agronomist, says growers who cut nitrogen application rates too greatly may end up cutting profits come harvest time.

Mayko points out that favourable soil moisture prospects for spring, plus higher than average canola prices, mean growers will need to use generous rates of nitrogen to achieve optimum net returns.

And he argues that, with today's higher yielding hybrids, growers must be sure to provide enough nitrogen to maximize the yield potential of hybrid genetics.

Research conducted by Agriculture and Agri-Food Canada and Westco Fertilizer indicates improved nitrogen response curves for hybrid varieties compared to open pollinated varieties.

This research shows that, for a given rate of nitrogen, hybrids typically yield better than open pollinated varieties. And at moderate nitrogen rates, the yield response curves for hybrids are steeper than open pollinated varieties. Findings also indicate that yield declines can be more pronounced on hybrids than open pollinated types if nitrogen rates are cut back.

Mayko advises growers to get a soil test this year to find out how much nitrogen and other macronutrients will be available to canola over the growing season.

"Only then can you make the right decision on how much to apply," said Mayko.

"Even if you pay 60 cents a pound for nitrogen, when canola is eight dollars a bushel, for every 10 pound-per-acre reduction in nitrogen rates, you can afford to lose only three-quarters of a bushel before it starts costing you money," he explained.

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Other than water, nitrogen is the nutrient that most commonly affects canola production. Canola responds well to applied nitrogen fertilizer on most soils, so maximizing the economic efficiency of your fertilizer dollars is important.

There are resources on the Internet to help canola growers take the guesswork out of determining nitrogen rates. For more information on recommended nitrogen rates for canola, producers can visit the following websites:

- www.directfocus.com/canolamanual/chapter9.html#ch9_sec6d;
- www.canola-council.org/PDF/apr28_CanolaFactsheet.pdf#zoom=100; and
- www.canola-council.org/PDF/Canola_Fact_Sheet_Oct27.pdf.

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